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coupled with the needle holder arranged in the region of a front hole of the cylinder to retract the needle holder together with the syringe needle into the cylinder by pulling the plunger, and wherein the needle holder is fixed or fixable in the region of the front hole to the cylinder by a groove-projection-arrangement having axially extending grooves with wide tapered groove entrances for receiving a respective projection so that the projections, after having passed the wide entrances and the axially extending grooves, can be rotated with respect to the axially extending grooves, to axially fix the needle holder in the region of the front hole against retraction into the cylinder.

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14. A syringe according to claim 10, characterized in that the groove-projection-arrangement is arranged such that the needle holder, which is fixed in the region of the front hole to the cylinder, can be released for retraction into the cylinder by rotating the needle holder with respect to the cylinder.

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12. A syringe according to claim 11, characterized in that the coupling between the plunger and the needle holder is adapted, to effect a rotation of the needle holder with respect to the cylinder by rotating the plunger, which is coupled with the needle holder, with respect to the cylinder.

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13. A syringe according to one of the preceding claims, characterized in that the groove-projection-arrangement comprises grooves located on the outer cylindrical surface of the needle holder and projections located in the region of the front hole on an inner surface of the cylinder to be received in said grooves.

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14.

A syringe according to claim 13, characterized in that said grooves have a first portion which substantially extends in axial direction, and a second portion which substantially extends in a circumferential direction, so that the grooves are substantially L-shaped.

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15.

A safety syringe, having a cylinder, a syringe needle, a needle holder associated to the cylinder and adapted to hold the syringe needle, and a plunger associated to the cylinder, wherein the plunger comprises a piston and serves to inject a filling of the cylinder via the syringe needle, wherein the plunger can be coupled with the needle holder arranged in the region of a front hole of the cylinder, to retract the needle holder together with the syringe needle into the cylinder by pulling the plunger, and wherein the needle holder is fixed or fixable in the region of the front hole to the cylinder by a groove-projection-arrangement, said groove-projection-arrangement comprising grooves located on an outer cylindrical surface of the needle holder and projections located in the region of the front hole on an inner surface of the cylinder to be received in said grooves, said grooves having a first portion which substantially extends in an axial direction, and a second portion which substantially extends in a circumferential direction, so that the grooves are substantially L-shaped.

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16.

A syringe according to claim 15, characterized in that the groove-projection-arrangement is arranged such that the needle holder, which is fixed in the region of the front hole to the cylinder, can be released for retraction into the cylinder by rotating the needle holder with respect to the cylinder.

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17.

A syringe according to claim 16, characterized in that the coupling between the plunger and the needle holder is adapted, to effect a rotation of the needle holder with respect to the cylinder by rotating the plunger, which is coupled with the needle holder, with respect to the cylinder.

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18.

A syringe according to one of the preceding claims, characterized in that the plunger has a predetermined breaking point, to allow that a re-use of the syringe can be inhibited by breaking the plunger.

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19.

A syringe according to one of the preceding claims, characterized in that the plunger carries a cap, which can be inserted in the front hole of the cylinder after retraction of the syringe needle into the cylinder.

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20.

A syringe according to claim 18, characterized in that after breaking the plunger a part of the plunger can be inserted in the front hole of the cylinder after retraction of the syringe needle into the cylinder.

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A syringe according to one of the preceding claims, characterized in that
the plunger and the needle holder can be coupled by a snap-in connection.

Respectfully submitted,

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